Replanning

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Replanning
Description

Overview

This scenario focuses on the options available when a limited automatic replan notification is received. The production planner may decide to ignore the message or replan when such an event occurs. In this scenario a single on-demand job has exceeded the replan notification threshold. This scenario investigates both situations. In addition to the replanning options, the replan thresholds may be adjusted as the production planner deems necessary.

Assumptions

• The On-demand request to be processed has already undergone SSI&T

• A replan threshold has been defined and set.

• An active plan and a resource Plan are currently up and running

Replanning
Details

Scenario

The submittal of an on-demand job triggers notification that the on-demand replan notification threshold has been exceeded and a limited automatic replan may be necessary. Two options are available :
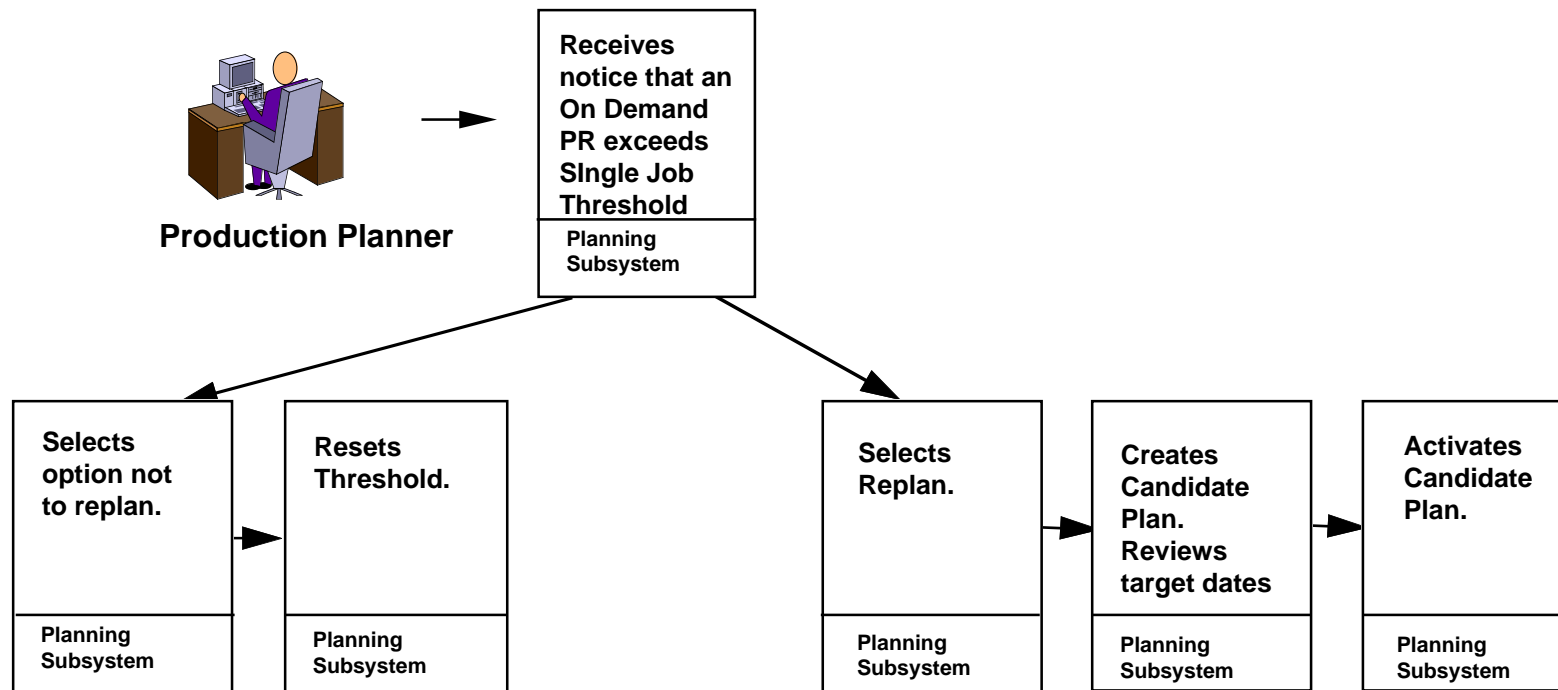
• Production Planner decides not to replan

 - Production Planner determines that the default threshold is too low, and adjusts the replan threshold to avoid notification of similar on-demand requests.

• Production Planner decides to accommodate this request and elects to replan which accesses the workbench to initiate the replan.

 - Planner selects option to create a candidate plan

 - Candidate plan is produced which includes the on-demand job that initiated the request, along with the accompanying target date estimations for the jobs within the time frame of the plan.

 - Low priority job does not meet its desired target date. Planner decides to activate the new plan anyway.

604 Scenario Heritage
 • Many of the features presented here are new
 • Operations Concept for the ECS Project: Part 2B - ECS Release B 604-CD-002-002 (Section 4.2.4.3 - On-Demand processing Requests and 4.2.4.5 - Add Hot Job)

Replanning
Functional Flow

Production Planner

Receives notice that an On Demand PR exceeds SIngle Job Threshold
Planning Subsystem

Selects option not to replan.
Planning Subsystem

Resets Threshold.
Planning Subsystem

Selects Replan.
Planning Subsystem

Creates Candidate Plan. Reviews target dates
Planning Subsystem

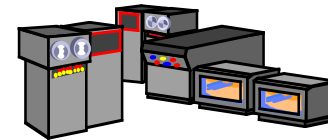| Activates Candidate Plan. |
|---|
| Planning Subsystem |

Replanning
Points of View- Ignore Replan

Production Planner

Planning Subsystem

•Examines the current on-demand replan threshold requirements for the specified job.

•Determines that the current threshold specified is too low and decides to reset the threshold.

• Closes pop up window and optionally decides to enter the planning workbench and accesses the configuration menu

•Selects option and modifies the existing on-demand replan notification threshold.

•Planning Subsystem notifies the production Planner that an on-demand job has exceeded the single on-demand job replan threshold.
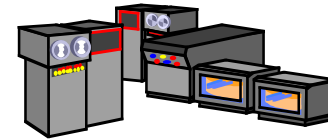
•Planning Subsystem displays the planning workbench

•Planning Subsystem resets the threshold, based on Production Planner specifications.

Replanning

Points of View - Replan due to exceeding threshold
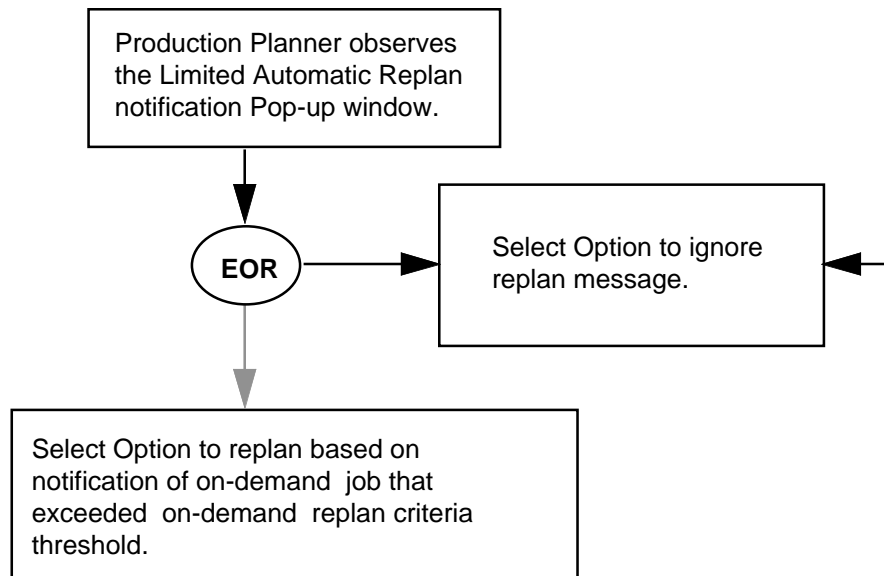
Production Planner

Planning Subsystem

- Examines the current on-demand replan threshold requirements for the specified job.

- Determines that the current threshold specified is sufficient for on-demand production requests and elects to replan.

- Selects option to replan.

- Reviews the plan and target date report generated by the candidate plan, and determines that the target dates for the low priority jobs are not critical to production and selects option to activate the candidate plan.

- Planning Subsystem receives notification of an on-demand request that has exceeded the single on-demand job replan threshold.

- Planning Subsystem displays the planning workbench.

- Planning Subsystem generates a candidate plan.

- Produces a target date report indicating the estimated completion date for production and its relationship to the desired target date

- Planning Subsystem activates the new plan.

Replanning
Workflow - Ignore Replan

Production Planner observes the Limited Automatic Replan notification Pop-up window.

EOR

Select Option to ignore replan message.

Select Option to replan based on notification of on-demand job that exceeded on-demand replan criteria threshold.

Select production planning workbench

Selects configuration screen, Chooses resource limits

Modify the threshold for jobs to be processed

ok

Activity - Ignore Replan
Role - DAAC Production Planner
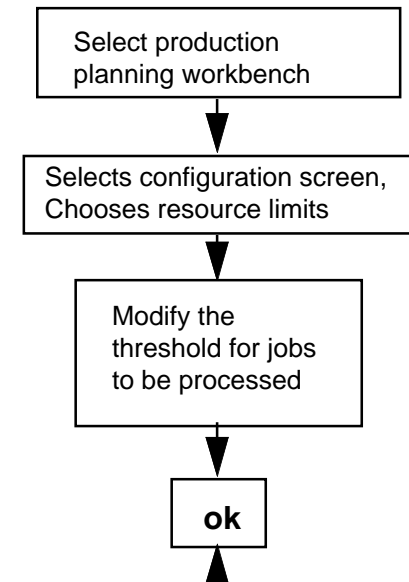
Replanning

Workflow - Replan due to exceeding threshold

Limited Automatic Replan
Dialog Pop-up

Activity - Exceed threshold Replanning
Role - Production Planner

EOR

Select Option
to ignore
replan report

Select Option to replan based on
report of on-demand threshold
that exceeded criteria threshold

I

Press Generate to Start Planning
Algorithm and Display Timeline

Update production strategies
and planning controls to
modify plan (See Routine
Planning for more details)

Review timeline and target date
report generated by the plan to
ensure that all critical target
dates will be met by this plan.

EOR

Select
Baseline
Plan

Select
Activate
Plan

+

I

Select
acquire plan
from Data
Server

Select plan
from
metadata
query

Insert Plan into
Data Server

Replanning
Data Activity

Operator Function	Data Element	Operation Interactions
Enter Configuration	Configuration Name	Edit
	External Data AutoReplan Toggle	Display
	External Data AutoReplan Delta	Edit
	External Data AutoReplan Timeframe	Display
	Single On-Demand AutoReplanToggle	Display
	Single AutoReplan CPU Limit	Display
	Single AutoReplan Disk Limit	Display
	Single AutoReplan RAM Limit	Display
	Cumulative On-Demand AutoReplan Toggle	Display
	Cumulative AutoReplan CPU Limit	Display
	Cumulative AutoReplan Disk Limit	Display
	Cumulative AutoReplan RAM Limit	Display
	AutoReplan for Resource Plan Change Toggle	Display
	Resource Change AutoReplan Timeframe	Display
	Individual On-Demand CPU Limit	Edit
	Individual On-Demand Disk Limit	Display
	Individual On-Demand RAM limit	Display
	Cumulative On-Demand CPU Limit	Display
	Cumulative On-Demand Disk Limit	Display
	Cumulative On-Demand RAM limit	Display
	Estimate of On-Demand Resources	Display
Exceed Threshold	Replan	Input
	Ignore	Input

Replanning
Data Activity

Operator Function	Data Element	Operation Interactions
Review Target Date Report	production Request	Display
	PGEName	Display
	Priority	DIsplay
	Requestor	Display
	PRCompletionDate	Display
	Desired target	Display
	Proposed target	Display
	DPRs beyond target	Display
Timeline	Resources	Display
	PGE Name	Display
	PGE StartTime	Display
	PGE StopTime	Display
	Disk Usage	Display
	RAM Usage	Display
	Plan Name	Display
	Plan StartTime	Display
	Plan StopTime	Display
	Ground Event Name	Display
	Ground Event StartTime	Display
	Ground Event StopTime	Display
Create Candidate Plan	StartTime	Edit
	EndTime	Edit
	Description	Edit
	Status (Candidate/Active)	Display
	Plan Name	Edit
	Production Request List	Edit
	Production Strategy	Edit
Activate Plan	StartTime	Display
	EndTime	Display
	Comment	Edit